

# Comparisons of Job Characteristics

**Focus Occupation:** [Network and Computer Systems Administrators \(15-1071\)](#)

**Associated Occupation:** [Computer Software Engineers, Applications \(15-1031\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

|    |  |
|----|--|
| << | Focus occupation element is much lower             |
| <  | Focus occupation element is lower                  |
| 0  | Focus occupation element is at a similar level     |
| >  | Focus occupation element is at a higher level      |
| >> | Focus occupation element is at a much higher level |

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 86

**Focus Occupation:** Network and Computer Systems Administrators (15-1071)

**Associated Occupation:** Computer Software Engineers, Applications (15-1031)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation                         |
|--|---------------------------------|--------------------------------|---------------------------|--|
| Computers and Electronics                      | 8.4                             | 23.8                           | 21.5                      | < Expanded education and/or training may be required   |
| Mathematics                                    | 9.2                             | 15.4                           | 9.1                       | << Extensive education and/or training may be required |
| Engineering and Technology                     | 5.7                             | 10.1                           | 9.0                       | < Expanded education and/or training may be required   |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 66

**Focus Occupation:** Network and Computer Systems Administrators (15-1071)

**Associated Occupation:** Computer Software Engineers, Applications (15-1031)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation                                  |
|---|---------------------------------|--------------------------------|---------------------------|---|
| Programming                                 | 2.2                             | 14.6                           | 8.5                       | << Extensive development of skills in this area may be required |
| Complex Problem Solving                     | 9.1                             | 14.1                           | 12.2                      | < A higher skill level may be required                          |
| Troubleshooting                             | 4.5                             | 13.5                           | 7.8                       | << Extensive development of skills in this area may be required |
| Systems Evaluation                          | 6.4                             | 13.4                           | 11.0                      | < A higher skill level may be required                          |
| Systems Analysis                            | 6.5                             | 13.3                           | 11.1                      | < A higher skill level may be required                          |
| Mathematics                                 | 6.2                             | 12.0                           | 7.0                       | << Extensive development of skills in this area may be required |
| Operations Analysis                         | 5.0                             | 11.4                           | 8.3                       | << Extensive development of skills in this area may be required |
| Technology Design                           | 2.6                             | 10.3                           | 6.5                       | << Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Abilities   |                                 | Similarity of Focus Occupation to Associated Occupation: 96 |                           |                                |  |
|---|---------------------------------|---|---------------------------|--------------------------------|--|
| Focus Occupation: Network and Computer Systems Administrators (15-1071)<br>Associated Occupation: Computer Software Engineers, Applications (15-1031) |                                 |   |                           |                                |  |
| Associated Occupation's Key Abilities Elements  | Average Rating, All Occupations | Associated Occupation's Rating                              | Focus Occupation's Rating | Evaluation of Focus Occupation |  |
| Deductive Reasoning   | 10.6                            | 13.6  | 12.7                      | 0                              | Current ability level may be sufficient            |
| Mathematical Reasoning  | 6.3                             | 12.4  | 7.9                       | <<                             | Extensive improvement in abilities may be required |
| Fluency of Ideas  | 7.6                             | 11.9  | 10.1                      | <                              | Some improvement in abilities may be required      |
| Number Facility   | 6.3                             | 11.2  | 7.2                       | <<                             | Extensive improvement in abilities may be required |
| Category Flexibility  | 9.0                             | 11.1  | 10.7                      | 0                              | Current ability level may be sufficient            |
| Originality   | 7.6                             | 10.8  | 9.1                       | <                              | Some improvement in abilities may be required      |
| Selective Attention   | 8.7                             | 10.5  | 9.9                       | 0                              | Current ability level may be sufficient            |
| Speed of Closure  | 5.9                             | 8.1   | 7.7                       | 0                              | Current ability level may be sufficient            |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

| Activities that Both Occupations Have in Common   |                         | Similarity of Focus Occupation to Associated Occupation: 75 |
|---|-------------------------|---|
| Focus Occupation: Network and Computer Systems Administrators (15-1071)<br>Associated Occupation: Computer Software Engineers, Applications (15-1031) |                         |   |
| Work Activities   | Exclusivity of Activity |   |
| Adjust computer operation system  | 84                      |   |
| Communicate technical information   | 4                       |   |
| Evaluate computer system user requests or requirements  | 81                      |   |
| Follow data security procedures   | 77                      |   |
| Revise or correct errors in computer programs, software, or systems   | 85                      |   |
| Test computer programs or systems   | 78                      |   |
| Use computers to enter, access or retrieve data   | 3                       |   |
| Use spreadsheet software  | 18                      |   |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 88

**Focus Occupation: Network and Computer Systems Administrators (15-1071)**  
**Associated Occupation: Computer Software Engineers, Applications (15-1031)**

| Tools and Technologies   | Exclusivity |
|--|-------------|
| Business function specific software                            | 1           |
| Computers  | 1           |
| Content authoring and editing software                         | 1           |
| Data management and query software                             | 1           |
| Development software   | 4           |
| Electronic and communication measuring and testing instruments | 14          |
| Industry specific software                                     | 1           |
| Network applications software                                  | 1           |
| Networking software  | 21          |
| Operating environment software                                 | 12          |
| Security and protection software                               | 30          |
| Utility and device driver software                             | 17          |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.